

Curriculum Vitae

Name	Tanmoy Bhattacharya
Date of Birth (dd/mm/yyyy)	06/10/1979
Designation	Assistant Professor
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Academic Qualification

Degree	Institution conferring the degree	Field(s)	Year
Bachelor of Engineering (B.E)	REC (NIT at present) Trichy (Bharathidasan University)	Electrical and Electronics	2002
Master of Science (Engineering)	Indian Institute of Science Bangalore	Power Electronics and Machine Drives	2005
Doctor of Philosophy (Ph.D)	Indian Institute of Science Bangalore	Power Electronics and Machine Drives	2009

Research Experience

Duration	Institution	Name of work done
January 2003- January 2005	Indian Institute of Science Bangalore	Flux Estimation, Parameter Adaptation and Speed Sensorless Control for Vector Controlled Induction Motor Drive (for Master of Science (Engineering))
January 2005- August 2009	Indian Institute of Science Bangalore	Battery buffered stiff micro grid structure for a variable speed slip ring induction machine based wind generation system (for Doctor of Philosophy (Ph.D))
October 2009- December 2010	National University of Singapore	Power electronic interface and energy management of different energy storages in a micro grid.

January 2011- Till Date	Indian Institute of Technology Kharagpur	Synchronous Pulse Width Modulation of Voltage Source Inverter, Field weakening of induction motor drive for traction application, Control of modular multilevel converter for HVDC application
Areas of Research	Pulse Width Modulation of Voltage source Inverter, Induction motor drives, hybrid converter for traction application	
Courses Taught at IIT Kharagpur		
<p><i>For Undergraduate Students:</i></p> <ol style="list-style-type: none"> 1. Electric Drives 2. Power Electronics <p><i>For Postgraduate Students:</i></p> <ol style="list-style-type: none"> 1. Electric Drives Systems 2. Advanced Machine Drives 3. HVDC & FACTS 		
List of Publications		
<p><i>Patents</i></p> <ol style="list-style-type: none"> 1. Title: Energy Storage System International Publication Date: 22nd March, 2016. International Publication Number: US9293917 B2 Inventors: Zhou Haihua, Tanmoy Bhattacharya and Ashwin M. Khambadkone <p><i>Journal Papers</i></p> <ol style="list-style-type: none"> 1. S. K. Sahoo and T. Bhattacharya, "Rotor Flux-Oriented Control of Induction Motor With Synchronized Sinusoidal PWM for Traction Application," in <i>IEEE Transactions on Power Electronics</i>, vol. 31, no. 6, pp. 4429-4439, June 2016. 2. S. K. Sahoo and T. Bhattacharya, "Field Weakening Strategy for a Vector-Controlled Induction Motor Drive Near the Six-Step Mode of Operation," in <i>IEEE Transactions on Power Electronics</i>, vol. 31, no. 4, pp. 3043-3051, April 2016. 3. Haihua Zhou, Tanmoy Bhattacharya, Duong Tran, Tuck Sing Terence Siew, and Ashwin M. Khambadkone, "Composite Energy Storage System Involving Battery and Ultracapacitor With Dynamic Energy Management in Microgrid Applications", <i>IEEE Transactions on Power Electronics</i>, Vol. 26, No. 3, pp. 923-930, March 2011. 4. T. Bhattacharya and L. Umanand, "Negative sequence compensation within 		

fundamental positive sequence reference frame for a stiff micro grid generation in a wind power system using slip ring induction machine”, *IET Proceedings Electric Power Applications*, vol. 3, no. 6, November, 2009, pp. 520-530.

5. T. Bhattacharya and L. Umanand, “Rotor position estimator for stator flux oriented sensorless control of slip ring induction machine”, *IET Proceedings Electric Power Applications*, vol. 3, no. 1, January, 2009, pp. 67-76.
6. T. Bhattacharya, V. Shriganesh Giri, K. Mathew and L. Umanand, “Multi Phase Bidirectional Fly-Back Converter Topology for Hybrid Electric Vehicles”, *IEEE Transactions Industrial Electronics*, vol. 56, no. 1, January, 2009, pp. 78-84.
7. S. Figarado, T. Bhattacharya, G. Mondal and K. Gopakumar, “Three-level inverter scheme with reduced power device count for an induction motor drive with common-mode voltage elimination”, *IET Proceedings Power Electronics*, vol. 1, no. 1, March, 2008, pp. 84-92.
8. T. Bhattacharya and L. Umanand, “Improved flux estimation and stator-resistance adaptation scheme for sensorless control of induction motor”, *IEE Proceedings Electric Power Applications*, vol. 153, no. 6, November, 2006, pp. 911-920.

Conference Papers

1. S. K. Sahoo and T. Bhattacharya, "Synchronization strategies in cascaded H-Bridge multilevel inverters for carrier based sinusoidal PWM techniques," 2016 *IEEE Applied Power Electronics Conference and Exposition (APEC)*, Long Beach, CA, 2016, pp. 199-206.
2. Sahoo, Saroj Kumar; Bhattacharya, Tanmoy; Aravind, M., "A synchronized sinusoidal PWM based rotor flux oriented controlled induction motor drive for traction application," *Applied Power Electronics Conference and Exposition (APEC), 2013 Twenty-Eighth Annual IEEE* , vol., no., pp.797,804, 17-21 March 2013.
3. M. Aravind and Tanmoy Bhattacharya, “FPGA Based Synchronized Sinusoidal Pulse Width Modulation with Smooth Transition into Overmodulation and Six Step Modes of Operation for Three Phase AC Motor Drives” *IEEE PEDES 2012*, December 2012.
4. Haihua Zhou; Bhattacharya, T.; Tran, D.; Tuck Sing Siew; Khambadkone, A.M.; , "Composite energy storage system with flexible energy management capability for micro-grid applications," *Energy Conversion Congress and Exposition (ECCE), 2010 IEEE* , vol., no., pp.2558-2563, 12-16 Sept. 2010
5. Haihua Zhou; Bhattacharya, T.; Khambadkone, A.M.; , "Composite Energy Storage System using dynamic energy management in microgrid applications," *Power Electronics Conference (IPEC), 2010 International* , vol., no., pp.1163-1168, 21-24 June 2010
6. T. Bhattacharya, V. S. Giri, K. Mathew and L. Umanand, “Multi Power Port Converter for Hybrid Electric Vehicles Using Multi Phase Bidirectional Fly-Back Topology”, *IEEE ICIT 2006*, pp. 1201-1205, Dec. 2006.